



# **TOOL BRACKET FOR STORING TOOL BITS**

## **BACKGROUND OF THE INVENTION**

### **1. Field of the Invention**

The present invention relates to a tool bracket, and more particularly to a tool bracket for storing tool bits, which makes carrying, inserting, selecting and removing tool bits convenient.

### **2. Description of Related Art**

With reference to Fig. 9, a conventional toolbox for storing tools for general use is well known and typically includes a base in the form of an open-top box (60) and a lid (70) pivotally attached to the box (60). The lid (70) has a clip (not shown) or other means to hold the lid (70) shut. The conventional toolbox typically has multiple compartments (80) to hold various tools and components, such as tool bits.

However, the conventional toolbox does not have features to efficiently arrange the various tools. A person cannot conveniently select or remove appropriate tool bits from the toolbox. When tool bits are stored in compartments in the conventional toolbox and are needed for various tools, finding a particular tool bit among many similar tool bits is difficult.

The present invention has arisen to mitigate or obviate the disadvantages of storing tool bits in conventional toolboxes.

## **SUMMARY OF THE INVENTION**

The main objective of the present invention is to provide a tool bracket for storing tool bits that makes carrying, selecting or removing tool bits convenient.

1 Further benefits and advantages of the present invention will become  
2 apparent after a careful reading of the detailed description with appropriate  
3 reference to the accompanying drawings.

#### 4 BRIEF DESCRIPTION OF THE DRAWINGS

5 Fig. 1 is an exploded perspective view of a first embodiment of a  
6 tool bracket for storing tool bits in accordance with the present invention;

7 Fig. 2 is a perspective view of the tool bracket in Fig. 1;

8 Fig. 3 is an operational perspective view of the tool bracket in Fig. 1  
9 with multiple tool bits in the tool bracket;

10 Fig. 4 is an enlarged operational cross-sectional side plan view of the  
11 tool bracket in Fig. 3;

12 Fig. 5 is an exploded perspective view of a second embodiment of  
13 the tool bracket in accordance with the present invention;

14 Fig. 6 is a perspective view of the tool bracket in Fig. 5;

15 Fig. 7 is an enlarged operational cross-sectional side plan view of the  
16 tool bracket in Fig. 6;

17 Fig. 8 is an operational cross-sectional side plane view of the tool  
18 bracket in Fig. 6; and

19 Fig. 9 is an exploded perspective view of a conventional toolbox in  
20 accordance with the prior art.

#### 21 DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

22 A tool bracket for storing tool bits in accordance with the present  
23 invention comprises a rectangular base with a cavity, a back, an open top,  
24 multiple positioning devices and a rack. The positioning devices are mounted

1 on the back to separate the tool bits, and the rack is attached pivotally to the  
2 base inside the cavity. The rack has multiple compartments to accommodate  
3 tool bits individually so a user can conveniently select or remove a desired  
4 tool bit.

5 With reference to Figs. 1, 2 and 3, a first preferred embodiment of a  
6 tool bracket for storing tool bits in accordance with the present invention  
7 comprises a base (10) and a rack (20) pivotally mounted on the base (10).

8 The base (10) is rectangular and has an open top (not numbered), a  
9 bottom (not numbered), two opposite sides (not numbered), a back (not  
10 numbered), an open front (not numbered), two pivot holes (12) and multiple  
11 optional positioning studs (14). The open top, bottom, two opposite sides,  
12 back and open front define a cavity (not numbered) inside the base (10). The  
13 pivot holes (12) are defined respectively in the two opposite sides near the  
14 bottom. Each pivot hole (12) has an inner surface and multiple detents (not  
15 numbered) formed on the inner surface. The positioning studs (14) are  
16 formed on the back and extend forward into the cavity.

17 The rack (20) is a rectangular body shaped to correspond to the  
18 cavity and has a top (not numbered), a bottom (not numbered), a front face  
19 (not numbered), a rear face (not numbered), two sidewalls (not numbered),  
20 multiple compartments (22), an elongated opening (24), two optional pivot  
21 pins (26) and an optional guard strip (28). The elongated opening (24) is  
22 defined through the rack (20) from the rear face to the front face between the  
23 two sidewalls to allow the positioning studs (14) to penetrate the rack (20)  
24 when the rack (20) is pivoted completely into the base (10). The multiple

1 compartments (22) are hexagonal retaining holes formed on the front face  
2 near the top of the rack (20) above the elongated opening (24) and  
3 respectively hold tool bits (30). The two pivot pins (26) are formed  
4 respectively on and extend respectively out from the two sidewalls near the  
5 bottom of the rack (20) to engage the two pivot holes (12) so that the rack  
6 (20) pivots in the cavity of the base (10). Each pivot pin (26) has an outer  
7 surface and multiple nubs (not numbered) formed on the outer surface to  
8 engage the multiple detents in the pivot holes (12) to hold the rack (20) in  
9 position relative to the base (10). The guard strip (28) has multiple recesses  
10 (282) facing inward and is formed between the sidewalls on the front face  
11 below the elongated opening (24). The recesses (282) correspond  
12 respectively to and align respectively with the multiple compartments (22)  
13 and hold lower portions of the tool bits (30).

14 Tool bits (30) stored in the rack (20) that is pivoted into the base (10)  
15 respectively have proximal ends (not numbered) and necks (not numbered)  
16 formed respectively around the tool bits (30) near the proximal ends. The  
17 positioning studs (14) penetrate the elongated opening (24) between adjacent  
18 tool bits (30) in the area of the necks of adjacent tool bits (30). Thereby, the  
19 tool bits (30) are held in the rack (20) by the positioning studs (14) that keep  
20 the tool bits (30) from sliding out of the open top of the base (10).

21 With further reference to Fig. 4, the necks of the tool bits (30)  
22 disengage from the positioning studs (14) when the rack (20) is pivoted out.  
23 The rack (20) is held in position by the nubs on the pivot pins (26) being  
24 rotated to different detents in the pivot holes (12). When the top of the rack

1 (20) with the tool bits (30) is tilted outward and the tool bits (30) are not held  
2 by the positioning studs (14), a person can conveniently select and remove  
3 the desired tool bit (30). Additionally, the tool bits can be displayed by laying  
4 the base (10) on a flat surface so the rack (20) is upright and the tool bits (30)  
5 extend upward for display.

6 With further reference to Figs. 5 to 8, a second embodiment of the  
7 tool bracket in accordance with the present invention has a base (10a) and a  
8 rack (20a) pivotally mounted inside the base (10a).

9 The base (10a) has a structure similar to the first preferred  
10 embodiment except the base (10a) of the second embodiment has a  
11 positioning U-holder (14a) instead of the positioning studs (14a) in the first  
12 embodiment. Each positioning U-holder (14a) has two arms (not numbered).  
13 When the rack (20a) is pivoted completely into the base (10a), the arms of  
14 the positioning U-holder (14a) clamp two sides of a tool bit in the area of the  
15 neck.

16 The rack (20a) is a rectangular case and has a top (not numbered), a  
17 bottom (not numbered), two sidewalls (not numbered), a front (not  
18 numbered), a rear (not numbered), two pivot pins (26a), multiple  
19 compartments (22a), multiple optional circular accesses (21a), multiple  
20 rectangular openings (24a) and two optional tabs (23a). The two pivot pins  
21 (26a) are formed respectively on the two sidewalls near the bottom of the  
22 rack (20a) to engage the two pivot holes (12a) so that the rack (20a) will  
23 pivot in the cavity in the base (10a). The compartments (22a) are defined  
24 inside the rack (20a), and the circular accesses (21a) are formed on the top of

1 the rack (20a) and communicate respectively with the compartments (22a) to  
2 hold multiple tool bits (30) inside the rack (20a). The multiple openings (24a)  
3 are defined in the rear of the rack (20a) to allow the positioning U-holder  
4 (14a) to pass through the rack (20a). Preferably, the multiple openings (24a)  
5 are defined in the front of the rack (20a) so that the user can see the size of  
6 the tool bits through the front openings (24a). Additionally, the optional tabs  
7 (23a) are formed on the top of the rack (20a) in front of the circular accesses  
8 (21a) so the user can conveniently pull the rack (20a) outward by the tabs  
9 (23a).

10 By placing the tool bits (30) individually in the rack (20, 20a), the  
11 tool bits (30) are arranged orderly in the tool bracket and can be selectively  
12 displayed so a desired tool bit (30) can be removed when the rack (20, 20a)  
13 tilts outward.

14 Although the invention has been explained in relation to its preferred  
15 embodiment, many other possible modifications and variations can be made  
16 without departing from the spirit and scope of the invention as hereinafter  
17 claimed.